

IN THE CLAIMS

Please amend the claims as follows:

Claims 1-38 (Cancelled).

Claim 39 (Currently Amended): A method of improving mobility of a body segment, the method comprising:

positioning at least two electrodes at the body segment; and
applying electrical stimulation to the body segment via the at least two electrodes,
wherein the electrical stimulation is adapted to mimic a sequencing of at least two muscle groups proximate to the body segment and is sufficient to achieve visible and forceful contraction of the at least two muscle groups.

Claim 40 (Previously Presented): The method of Claim 39, wherein the applying includes applying the electrical stimulation transcutaneously.

Claim 41 (Previously Presented): The method of Claim 40, wherein the applying further includes applying neuromuscular electrical stimulation.

Claim 42 (Previously Presented): The method of Claim 39, wherein the applying includes applying neuromuscular electrical stimulation.

Claim 43 (Previously Presented): The method of Claim 39, wherein the applying includes applying the electrical stimulation for approximately ten minutes to approximately four hours.

Claim 44 (Previously Presented): The method of Claim 39, wherein the applying includes applying the electrical stimulation within a range of approximately 5 mA to approximately 150 mA as rated into a 500 ohm load.

Claim 45 (Previously Presented): The method of Claim 39, wherein the positioning includes positioning the at least two electrodes at a thigh.

Claim 46 (Previously Presented): The method of Claim 39, wherein the body segment includes or is proximate to a joint having a synovium.